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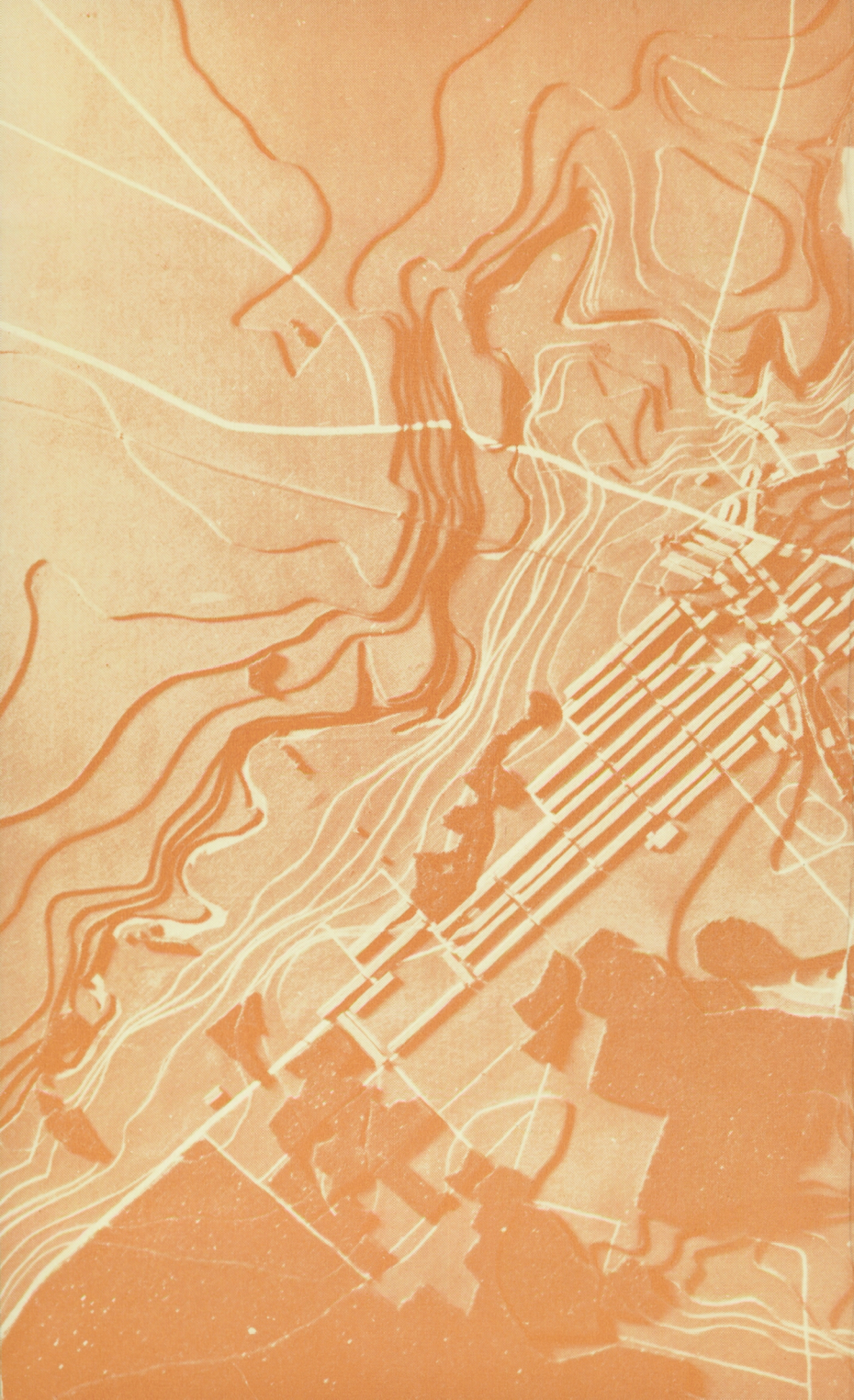
THE UNIVERSITY OF NEW SOUTH WALES

FACULTY OF ARCHITECTURE

HANDBOOK

1965



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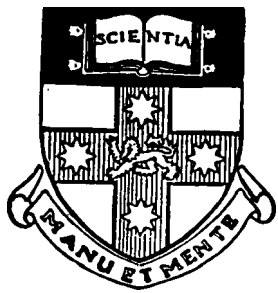

FACULTY OF ARCHITECTURE HANDBOOK

1965

UNIVERSITY OF NEW SOUTH WALES

PRICE 5/-

CONPRESS PRINTING LIMITED, SYDNEY

FOREWORD

Since the dawn of civilization man has sought to endow his environment with physical and spiritual qualities appropriate to his way of life, to explore the limits of his materials and techniques, and in so doing, to create buildings of enduring beauty. In each great culture of the past this search produced a characteristic architecture which was a true reflection of the aspirations and capabilities of its age.

Today's architects and builders face the same age-old problem, but their task is made infinitely more difficult by the complexity of modern requirements and the diversity of new materials and techniques available to them. For the first time in history material progress threatens to outstrip man's visionary powers and to overwhelm his capacity for assimilation.

Within the next twenty years the world must face a gigantic population explosion. Our building industry must undergo a revolution if it is to meet even the most elementary needs of the community, and our search for appropriate building forms must be related to the practical necessities of mass production on a hitherto unprecedented scale. The pressure will be felt in every field of human endeavour, but to the architects and builders of tomorrow it will represent the greatest challenge and the greatest opportunity of all time.

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Faculty of Architecture

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CHAIRMAN: PROFESSOR J. M. FREELAND

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Administrative Officer

C. L. Durant, S.C.

Secretary to the Dean

Mrs. M. Conning

General Information

REQUIREMENTS FOR ADMISSION

For admission to the degree courses in architecture and building, candidates must satisfy one of the following requirements:

(a) Pass the New South Wales Leaving Certificate or University of Sydney Matriculation Examination in at least five approved subjects at the one examination.

(b) Hold a Diploma from the New South Wales Department of Technical Education, or any other technical college which may from time to time be recognised by the University, subject to the Professorial Board being satisfied that the applicant's qualifications are sufficient for matriculation.

(c) Be a graduate of any approved university or a matriculant of any university whose requirements for entry are, in the opinion of the Professorial Board, comparable with those of the University of New South Wales.

(d) Produce evidence of at least one year's training at the Royal Military College of Australia or the Royal Australian Air Force College, or evidence of having satisfactorily completed the passing out examination of the Royal Australian Naval College.

The Professorial Board may in special cases declare any person qualified to enter a Faculty as a "provisionally matriculated student" although he has not complied with the requirements outlined above.

Intending applicants are advised to consult the University calendar for details of approved matriculation subjects and conditions governing each of the above categories, or to contact the Admissions Office in the Main Building at Kensington between 9 a.m. and 5 p.m. Telephone 663-0351.

ENROLMENT PROCEDURE

First Enrolments. Application for enrolment in First Year must, wherever possible, be made in person to the Student Enrolment Bureau, Kensington, as soon as the results of the Leaving Certificate Examination are published, but in any event not later than 27th January.

Country Residents. Country residents who wish to enrol with the University should write to the Registrar, Post Office Box 1, Kensington, for an application form. This form must be returned not later than 27th January.

Applicants for enrolment with advanced standing, or applicants relying upon overseas examinations for matriculation should lodge an application with the Admissions Office prior to 1st November of the year preceding that in which admission is sought.

First Year Repeats. First Year students who fail all subjects at the annual examinations and who are not granted any deferred examinations must apply for re-enrolment to the Student Enrolment Bureau at the time set out above for first enrolments. Other First Year repeat students must follow the procedure set out below for Later Year Enrolments.

Later Year Enrolments. All students enrolling other than for the first time should enrol through the School of Architecture and Building during the week before the commencement of First Term. Specific dates and times are set aside for various groups, and students are advised to adhere to the enrolment programme.

Conversion Course Enrolments. Enrolment in conversion courses must commence with an application to the Registrar for admission. The applicant will be notified of the subsequent procedure.

Post-Graduate Enrolments. Students enrolling in post-graduate courses which include formal instruction are required to attend the appropriate enrolment centre as prescribed annually in the leaflet "Enrolment Procedure for Students Re-enrolling".

FEES*

Fees for Undergraduate Courses

Fees for undergraduate courses in Architecture and Building are assessed on a term basis.

A full-time course fee will be charged for any term where more than 15 hours' per week instruction, etc., is involved.

(i) Full-time Course Fee (more than 15 hours' attendance per week) . . . . . £48 per term

(ii) Part-time Course Fee (over 4 hours' and up to 15 hours' attendance per week) . . . . . £24 per term

(iii) Part-time Course Fee (4 hours' or less attendance per week) . . . . . £12 per term

*The fees quoted may be amended by Council without notice. Intending applicants should therefore refer to the current University Calendar before submitting their application for registration.

Fees for Higher Degrees

An approved applicant shall be required to pay the following fees:

(1) A registration fee of £2.

(2) A combined laboratory and supervision fee of —
  (a) £30 p.a. for students in full-time attendance.
  (b) £15 p.a. for students in part-time attendance.
  (c) £10 p.a. for students working externally to the University.

(3) A fee of £15 when submitting the thesis for examination.

Fees for Graduate Diplomas

(i) Registration Fee, £2.

(ii) Award of Diploma Fee, £3.

(iii) Course Fee — calculated on the basis of a term's attendance at the rate of £2/10/- per hour per week. Thus the fee for a programme requiring an attendance of 24 hours per week for the term is 24 × £2/10/- = £60 per term.

Other Fees

Students in any of the above categories are also required to pay the following fees:

Library Fee*		£5
Student Activities Fees*		
University Union§	£6	
Sports Association§	£1	
Students' Union§	£2	
Miscellaneous	£2	
TOTAL		£11

*Annual fee.

§Life members of these bodies are exempt from the appropriate fee or fees.

Payment of Fees

All undergraduate and graduate diploma students are required to attend the School enrolment centre during the prescribed enrolment period for authorisation of course programme. Failure to do so will incur a late fee of £1.

Fees should be paid during the prescribed enrolment period but will be accepted without incurring a late fee during the first two weeks of First

Term. No student is regarded as having completed an enrolment until fees have been paid. *Fees will not be accepted (i.e., enrolment cannot be completed) after 31st March* except with the express approval of the Registrar.

Students who are unable to pay their fees by the year may pay by the term, in which case fees must be paid within the first two weeks of each term.

Assisted Students

Scholarship holders or sponsored students who have not received an enrolment voucher or appropriate letter of authority from their sponsor by the enrolment period should complete their enrolment by paying their own fees. A refund will be made when the appropriate voucher or letter of authority is subsequently lodged with the Cashier.

Late Fees

Failure to attend enrolment centre for authorisation of course programme (see above)	£1
First Term —	
Fees paid from commencement of 3rd week to 31st March	£3
Fees paid after 31st March (where approved by the Registrar)	£5
Second and Third Terms —	
Fees paid in 3rd and 4th weeks of term	£3
Fees paid thereafter	£5
Late Lodgement of Application for Admission to Examinations (late applications will be accepted for three weeks only after the prescribed dates)	£2

Withdrawal from Course

Students withdrawing from a course are required to notify the Registrar in writing. Fees for the course accrue until a written notification is received.

ACADEMIC YEAR

The academic year is divided into three terms of 11, 10 and 9 weeks respectively. The first term commences on the first Monday of March. There is a two-week vacation between First and Second Terms and a three-week vacation between Second and Third Terms.

ATTENDANCE AT CLASSES

Students are expected to be regular and punctual in attendance at all classes in which they are enrolled. All applications for exemption from attendance must be made in writing to the Registrar.

Where a student has attended less than eighty per cent of the possible classes, he may be refused permission to sit for the examination in that subject.

Application forms for exemption from lectures are available at the Admissions Office and should be lodged there (with a medical certificate where applicable). If term examinations have been missed this fact should be noted in the application.

UNIVERSITY UNION CARD

All students other than miscellaneous students are issued with a University Union Membership Card. This card must be carried during attendance at the University and shown on request.

The number appearing on the front of the card in the space at the top right-hand corner is the student registration number used in the University's records. This number should be quoted in all correspondence.

The card must be presented when borrowing from the University libraries, when applying for travel concessions and when notifying a change of address. It must also be presented when paying fees on re-enrolment each year when it will be made valid for the year and returned. Failure to present the card could result in some inconvenience in completing re-enrolment.

A student who loses a Union card must notify the University Union as soon as possible.

New students will be issued with University union cards by mail to their address as soon as possible after fee payment. In the meantime, the fees receipt form should be carried during attendance at the University and shown on request. If the union card is not received within three weeks of fee payment, the Examinations Branch should be notified.

ANNUAL EXAMINATIONS

The annual examinations take place in November-December for students in 30-week courses, and in September for students in 24-week courses. Students must make application to sit for examinations by a specified date, the procedure being described in the University Calendar. Enquiries should be directed to the Examinations Branch. Examination results are published in the daily press. *No results will be given prior to publication* and all subsequent enquiries relating to results must be directed to the Registrar.

APPLICATION FOR ADMISSION TO DEGREE OR DIPLOMA

Application for admission to a degree or diploma must be made on the appropriate form by 31st January. Applications for the award of a diploma of Associateship of Sydney Technical College (A.S.T.C.) awarded by the N.S.W. Department of Technical Education must be made on the appropriate form by 31st March. Applicants should ensure that they have completed all requirements for the degree or diploma, including industrial training where necessary.

Undergraduate Courses

Undergraduate courses in both Architecture and Building are designed to provide a thorough training in the basic sciences upon which modern building technology depends. These studies lead to scientific and practical analysis of materials and methods used in building design and construction. Special studies are made of acoustics and lighting, and advanced training is provided in structures and in the services and equipment which are vital to the operation of the present-day building.

In the architecture course students are encouraged to develop their creative abilities. Initial appreciation of visual design and colour is followed by advanced work in architectural design, civic architecture and town planning. Studies in the building course place emphasis on subjects dealing with law, management, accounting and finance, but in both cases the content of courses has been designed to maintain a balance between creative and artistic talents on the one hand and practical ability and sound commonsense on the other. In short, both courses are aimed at the production of graduates whose overall knowledge is balanced in such a way that they may accept positions of responsibility immediately their training is complete, or pursue a specialised field of architectural education with a realistic appreciation of its implications in the range of total architecture.

Throughout their training students of both courses share many common subjects and work in close association with one another upon their various assignments. It has been found that this close association of architect and builder during their formative years leads to an understanding of each other's problems which is invaluable in the subsequent practice of their individual but closely related disciplines.

Professional Recognition. The degree of Bachelor of Architecture of the University of New South Wales is fully recognised by the Royal Australian Institute of Architects, the Royal Institute of British Architects, and by the New South Wales Board of Architects for legal registration as an architect in New South Wales. The degree of Bachelor of Building qualifies for membership of the Australian Institute of Builders.

Students are encouraged to join these institutions as student members and thus take part in corporate activities such as meetings, annual conventions and conferences.

In addition to recognition by professional bodies, these degrees are recognised for partial exemptions in many post-graduate courses throughout Australia and Great Britain, and a significant proportion of graduates leave Australia upon completion of their training to pursue specialised courses overseas.

DEGREE COURSE IN ARCHITECTURE — B. ARCH.

The course for a pass degree in architecture may be programmed for a 5, 6, 7 or 8-year timetable, dependent upon the amount of full-time training undertaken by the candidate. Subjects have been grouped to form eight study units, several of which may be taken in pairs by full-time attendance.

or singly by part-time attendance. Units must be undertaken in numerical sequence or, in the case of full-time training, in the following combinations:

Study Units	Attendance Pattern
Unit No. 1 Unit No. 2	1 year full-time*
Unit No. 3 Unit No. 4	1 year full-time OR 2 years part-time
Unit No. 5 Unit No. 6	1 year full-time OR 2 years part time
Unit No. 7	1 year part-time
Unit No. 8	1 year part-time

Students may transfer from full-time to part-time training or *vice versa* upon completion of study units 1 AND 2 or 3 AND 4.

The minimum period for graduation (except for students entering the course with advanced standing) will be five years.

ARCHITECTURE DEGREE COURSE

Bachelor of Architecture

	FIRST YEAR	FULL-TIME PROGRAMME (30 weeks' course) Lec.	Prac.	PART-TIME PROGRAMME *Stage 1* Study Unit 1 (30 weeks' course) Lec.	Prac.	*Stage 2* Study Unit 2 (30 weeks' course) Lec.	Prac.
11.111	Design I	1	0	1	0	0	0
11.121	History of Architecture I	1	0	1	0	0	0
11.131	Drawing I	0	9				
11.131/1	Drawing IA			0	5	0	0
11.131/2	Drawing IB			0	0	0	3
11.211	Construction I	1	3	0	0	1	2
11.221	Structures I	1	1	0	0	1	1
11.231	Building Science I	1	1	0	0	1	1
11.611	Building Trades I	0	3	0	0	0	3
10.051	Mathematics	2	0	2	0	0	0
1.011	Physics	2	1	2	1	0	0
		9	18	6	6	3	10

*Under special circumstances the Dean may permit a candidate to undertake Units 1 and 2 by part-time attendance over two academic years.

SECOND YEAR		FULL-TIME PROGRAMME	PART-TIME PROGRAMME	
			Stage 3	*Stage 4*
			Study Unit 3	Study Unit 4
		(30 weeks' course)	(30 weeks' course)	(30 weeks' course)
		Lec. Prac.	Lec. Prac.	Lec. Prac.
8.211	Building Science IIB	0 — 2	0 — 0	0 — 2
11.112	Design II	1 — 6		
11.112/1	Design IIA		1 — 2	0 — 0
11.112/2	Design IIB		0 — 0	0 — 3
11.122	History of Architecture II	1 — 0	1 — 0	0 — 0
11.132	Drawing II	0 — 6		
11.132/1	Drawing IIA		0 — 3	0 — 0
11.132/2	Drawing IIB		0 — 0	0 — 3
11.212	Construction II	1 — 5	0 — 0	0 — 0
11.212/1	Construction IIA	0 — 0	$\frac{1}{2}$ — 1	0 — 0
11.212/2	Construction IIB	0 — 0	0 — 0	$\frac{1}{2}$ — 1
11.222	Structures II	1 — 1		
11.222/1	Structures IIA		$\frac{1}{2}$ — 1	0 — 0
11.222/2	Structures IIB		0 — 0	$\frac{1}{2}$ — 1
11.232	Building Science IIA	1 — 0	1 — 0	0 — 0
50.011H or 57.011H	English or An Introduction to Modern Drama	2 — 0		
50.011H/1	English		1 — 0	
50.011H/2	English			1 — 0
		7 —20	5 — 7	2 —10

	THIRD YEAR	FULL-TIME PROGRAMME (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage 5* Study Unit 5 (30 weeks' course) Lec. Prac.	*Stage 6* Study Unit 6 30 weeks' course) Lec. Prac.
8.411	Surveying	0 — 1	0 — 1	0 — 0
11.113	Design III	1 —12		
11.113/1	Design IIIA		1 — 3	0 — 0
11.113/2	Design IIIB		0 — 0	0 — 3
11.123	History of Architecture III	1 — 0	0 — 0	1 — 0
11.213	Construction III	1 — 5	0 — 0	1 — 2
11.223	Structures III	1 — 1	1 — 1	0 — 0
11.233	Building Science III	1 — 0	1 — 0	0 — 0
11.241	Building Services A	1 — 0	0 — 0	1 — 0
	Humanities —			
	History or Philosophy	1 — 0	1 — 0	0 — 0
	Social Science Elective	1 — 0	0 — 0	1 — 0
		8 —19	4 — 5	4 — 5

	FOURTH YEAR	Study Unit 7 (30 weeks' part-time course) Lec. Prac.
11.011H/1	Humanities (History of Fine Arts, Part A)	1 — 0
11.114	Design IV	0 — 3
11.124	History of Architecture IV	1 — 0
11.224	Structures IV	2 — 0
11.234	Building Science IV	1 — 0
11.242	Building Services B	1 — 0
		6 — 3

	FIFTH YEAR	Study Unit 8 (30 weeks' part-time course) Lec. Prac.
11.115	Design V*	0 — 3
11.225 11.141 11.235	Structures V or Architectural Research or Building Science V	1 — 1
11.311	Specifications	1 — 0
11.321	Professional Practice	1 — 0
11.411	Town Planning	⅔ — ⅔
11.723	Estimating	1 — 0
		4⅓—4⅓

Special Final Year for Honours. Students wishing to qualify for honours may, upon successful completion of Study Unit No. 7, apply to Faculty to enter a special full-time final year. Applicants will be expected to have completed all preceding study units in their course, and to have obtained at least seven credit grades in the annual results of preceding subjects.

Students who are admitted to the special final year for honours but fail to reach honours standard may be awarded a pass degree by Faculty provided that the work submitted meets the requirements for a pass degree.

	FIFTH YEAR (HONS.)	Study Unit 8 (30 weeks' full-time course) Lec. Prac.
11.116	Design V (Hons.)*	0 —15
11.141 11.225 11.235	Architectural Research or Structures V or Building Science V	1 — 1
11.311	Specifications	1 — 0
11.322	Professional Practice (Hons.)	2 — 0
11.412	Town Planning (Hons.)	1 — 3
11.723	Estimating	1 — 0
11.142	Research Thesis	0 — 0
		6 —19

* Final year students (pass and honours) will take the four-day en-loge formal final examination in Design V.

DEGREE COURSE IN BUILDING — B. BUILD.

The undergraduate course in Building may be timetabled for a 4, 5, 6 or 7 year programme depending upon the amount of full-time attendance. The final year is offered on a part-time basis only, supplementing a period of "on-site" training.

The course is divided into three sections:

(a) Basic academic studies which provide a background of mathematics, physics, history, philosophy, a social science, and English.

(b) Technical subjects which ensure a thorough training in the practical matters of building construction and building trade practices, assembly techniques, materials and equipment.

(c) Administrative subjects related to building enterprises and management including finance, company law, Building Acts and Codes, job organisation, site methods, quantity surveying, estimating, accounting, etc.

The first year of the Building degree course is common with that of the Architecture degree course, and several of the subjects in subsequent years are attended by students from both courses.

	FIRST YEAR	FULL-TIME PROGRAMME (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage 1* (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage 2* (30 weeks' course) Lec. Prac.
11.111	Design I	1 — 0	1 — 0	0 — 0
11.121	History of Architecture I	1 — 0	1 — 0	0 — 0
11.131	Drawing I	0 — 9		
11.131/1	Drawing IA		0 — 5	0 — 0
11.131/2	Drawing IB		0 — 0	0 — 3
11.211	Construction I	1 — 3	0 — 0	1 — 2
11.221	Structures I	1 — 1	0 — 0	1 — 1
11.231	Building Science I	1 — 1	0 — 0	1 — 1
11.611	Building Trades I	0 — 3	0 — 0	0 — 3
10.051	Mathematics	2 — 0	2 — 0	0 — 0
1.011	Physics	2 — 1	2 — 1	0 — 0
		9 —18	6 — 6	3 —10

	SECOND YEAR	FULL-TIME PROGRAMME (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage 3* (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage 4* (30 weeks' course) Lec. Prac.
8.211	Building Science IIB	0 — 2	0 — 0	0 — 2
8.242S	Soil Mechanics for Building	1 — ½	1 — ½	0 — 0
8.411	Surveying	1 — 0	1 — 0	0 — 0
11.212	Construction II	1 — 5		
11.212/1	Construction IIA		½— 1	0 — 0
11.212/2	Construction IIB		0 — 0	½— 1
11.222	Structures II	1 — 1		
11.222/1	Structures IIA		½— 1	0 — 0
11.222/2	Structures IIB		0 — 0	½— 1
11.232	Building Science IIA	1 — 0	1 — 0	0 — 0
11.612	Building Trades II	0 — 6	0 — 3	0 — 3
11.711	Quantity Surveying A	1 — 1	0 — 0	1 — 1
11.741	Building Acts and Regulations	½— 0	0 — 0	½— 0
14.001	Accounting and Costing for Builders	2 — 1	2 — 1	0 — 0
50.011H 57.011H	English or Introduction to Modern Drama	2 — 0	1 — 0	1 — 0
		10½—16½	7 — 6½	3½— 8

	THIRD YEAR	FULL-TIME PROGRAMME (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage 5* (30 weeks' course) Lec. Prac.	PART-TIME PROGRAMME *Stage 6* (30 weeks' course) Lec. Prac.
11.213/1	Construction IIIA	1 — 9		
11.213/2	Construction IIIB		½— 3	0 — 0
11.213/3	Construction IIIC		0 — 0	½— 3
11.223	Structures III	1 — 1	1 — 1	0 — 0
11.233	Building Science III	1 — 0	1 — 0	0 — 0
11.731	Building Management	2 — 0		
11.731/1	Building Management A		1 — 0	0 — 0
11.731/2	Building Management B		0 — 0	1 — 0
11.721	Estimating A	1 — 1	0 — 0	1 — 1
11.241	Building Services A	1 — 0	0 — 0	1 — 0
14.051	Law for Builders I	2 — 0	0 — 0	2 — 0
14.021	Business Finance	2 — 0	2 — 0	0 — 0
11.311	Specifications	1 — 0	1 — 0	0 — 0
	Humanities (History or Philosophy)	1 — 0	1 — 0	0 — 0
	Social Science Elective	1 — 0	0 — 0	1 — 0
		14 —11	7½— 4	6½— 4

FOURTH YEAR or STAGE 7

(30 weeks' part-time course)

		Lec.	Prac.
11.011H/1	Humanities (History of Fine Arts)	1	0
11.224	Structures IV	2	0
11.234	Building Science IV	1	0
11.242	Building Services B	1	0
11.411	Town Planning	$\frac{2}{3}$	$\frac{2}{3}$
11.722	Estimating B	1	1
	and either		
11.712	Quantity Surveying B	2	0
	or		
14.052	Law for Builders II	1	0
		$7\frac{2}{3}$ or $8\frac{2}{3}$	$1\frac{2}{3}$

CONVERSION COURSE IN ARCHITECTURE

Holders of the A.S.T.C. Diploma of the Department of Technical Education in Architecture may proceed to an appropriate degree by means of a conversion course. The syllabuses of these courses are arranged so that diplomates are given credit for their diploma studies and may satisfy the degree requirements with the minimum of repetition and overlap.

Each application will be considered on its merits, but the minimum requirement to satisfy for a degree in architecture after completing a diploma course are:—

		Hours per week
1.	Conversion Humanities	4
2. 11.176	Architectural Science and Research Thesis*	24
3. Any two of the following:—		(Term 1)
1.001	Physics	3
25.531	Geology for Engineers	3
8.211	Building Science IIB (Materials for Architects)	2
10.051	Mathematics	2
		(Terms 2 & 3)
11.231	Building Science I	2

*In special circumstances a student may apply to complete this subject by part-time study over three terms. The holder of a diploma with credit or honours may apply to be exempted from this subject, provided that —

(a) at the completion of his Conversion course he will have had two years' standing as a diplomate;

(b) he gained a credit or distinction for the research or design thesis in the diploma course;

(c) he provides evidence to the Faculty that in his professional career he has pursued some aspect of study in Architectural Science and Research which, together with the diploma thesis, is regarded as equivalent to the subject of 11.176 Architectural Science and Research Thesis.

EXTENSION COURSES

The School of Architecture and Building from time to time conducts extension courses in specialist fields of study related to architecture and building. These courses are normally open to qualified members of the various land-use professions, upon payment of a fee appropriate to the length of the particular course.

DIPLOMA COURSES

In 1951 the University undertook to provide instruction on behalf of the Department of Technical Education and a large number of Diploma courses were conducted. Under an agreement reached with the Department in 1959 most of these courses have been withdrawn, but the School of Architecture and Building still conducts diploma courses in Building and Quantity Surveying. Details of these two courses may be obtained upon application to the Head of the School.

ACADEMIC DRESS

Academic dress worn by graduates in Architecture and Building of the University of New South Wales is described below:

Gowns

Degree of Bachelor — The gown worn by graduates holding the degree of Bachelor of Arts in the University of Oxford or the University of Cambridge.

Degree of Master — The gown worn by graduates holding the degree of Master of Arts in the University of Oxford or the University of Cambridge.

Degree of Doctor of Philosophy — Festal gown of black cloth faced with scarlet cloth to a width of 6 inches.

Cap

Degrees of Bachelor, Master, and Doctor of Philosophy:
Black cloth trencher cap.

Hoods

Bachelor of Architecture — Hood of black silk lined with white silk and edged with brick-red-coloured silk.

Bachelor of Building — Hood of black silk lined with grey silk and edged with brick-red-coloured silk.

Master of Architecture — Hood of black silk lined with brick-red-coloured silk and edged to a depth of two inches with white silk.

Master of Building — Hood of black silk lined with brick-red-coloured silk and edged to a depth of two inches with grey silk.

Doctor of Philosophy — Hood of scarlet cloth lined with black silk.

Post-Graduate Study

HIGHER DEGREES

Following the award of a first degree in Architecture or Building of the University of New South Wales or other approved university, graduates may apply to register for the degrees of Master of Architecture or Master of Building. In exceptional cases persons may be permitted to register as candidates for the degree of Master if they submit evidence of such general and professional attainments as may be approved by the Professorial Board.

Summary of the Conditions for the Award of a Master's Degree

(1) Every candidate for the degree shall be required to carry out a programme of advanced study, to take such examinations, and to perform such other work as may be prescribed by the Professorial Board. The programme shall include the preparation and submission of a thesis embodying the results of an original investigation or design relative to architecture or building. The candidate may also submit any work published, whether or not such work is related to the thesis.

(2) No candidate shall be considered for the award of the degree until the lapse of six complete terms from the date from which the registration becomes effective, save that in the case of a full-time candidate who has obtained the degree of Bachelor with Honours or who has had previous research experience, this period may, with the approval of the Professorial Board, be reduced by not more than three terms.

(3) For each candidate there shall be two examiners appointed by the Professorial Board, one of whom shall, if possible, be an external examiner.

(4) Every candidate shall submit three copies of the thesis as specified in the University calendar, and it shall be understood that the University retains the three copies of the thesis and is free to allow the thesis to be consulted or borrowed. Subject to the provisions of the *Copyright Act, 1912-1950,* the University may issue the thesis in whole or in part in photostat or micro-film or other copying medium.

POST-GRADUATE COURSES

In addition to the facilities available for the pursuit of higher degrees, the School offers the following formal post-graduate courses:

(1) A one-year full-time course in Civic Design.
(2) A two-year part-time course in Landscape Design.

Admission

Applicants for admission to these courses shall be graduates in Architecture of the University of New South Wales or the holders of such other qualifications as may be approved by Faculty.

Nature of Award

Successful completion of the prescribed course of study will lead to the award of a post-graduate diploma.

GRADUATE DIPLOMA IN CIVIC DESIGN — Dip.C.D.

This course is designed to provide for post-graduate research and study in the planning of residential neighbourhoods. The function, social significance, physical form and civic design of the complete neighbourhood will be critically examined. The course will be of one year full-time duration, leading to the award of a Graduate Diploma in Civic Design. It will be the first of a series of graduate diploma courses which the School of Architecture and Building intends to offer on an annual basis, with the aim of creating opportunities for full-time research and study in specific areas of architecture, building and town planning. A feature of these courses will be the appointment of an expert or visiting professor in the particular field to guide the study and research.

Visiting Professor for 1965

Professor Steen Eiler Rasmussen, Professor of Architecture at the Royal Academy of Fine Arts, Denmark, will be the Visiting Professor for a period in 1965. During his distinguished academic and professional career in architecture and town planning Professor Rasmussen has been a member of the Danish Royal Academy of Fine Arts; architect to the Municipal Town Planning Office, Copenhagen, 1932-38; President of the Copenhagen Regional Planning Committee, 1945-58; Lethaby Professor, Royal College of Art, London, 1958; Visiting Professor in the U.S.A. to M.I.T., Yale, Philadelphia and Berkeley; Honorary Corresponding Member, Royal Institute of British Architects, and Honorary Member, Town Planning Institute (London). Professor Rasmussen's publications include the books *London, The Unique City; Towns and Buildings;* and *Experiencing Architecture.*

Course Structure — 30 weeks' full-time course

		Hours per week					
		Term 1		Term 2		Term 3	
		Lec.	Prac.	Lec.	Prac.	Lec.	Prac.
11.920G	Theory of Neighbourhood Planning	1	— 0	1	— 0	2	— 0
11.921G	Practice of Neighbourhood Planning	1	—12	1	—12	2	—16
11.922G	Communications and Public Utilities	2	— 0	2	— 0	2	— 0
11.923G	Land and Housing Economics	2	— 2	2	— 2	0	— 0
11.924G	Urban Sociology	1	— 1	1	— 1	0	— 0
		7	—15	7	—15	6	—16

GRADUATE DIPLOMA IN LANDSCAPE DESIGN (Dip. L.D.)

This course, the first of its kind to be offered in Australia, has been designed to extend the knowledge of architects to embrace an important environmental study closely associated with that of their own profession. It is a discipline which has so far received little attention in this country, yet may be expected to play a significant part in the future shaping of our environment.

Course Structure — two years' part-time study

	Year I	Term 1 Lec.	Prac.	Term 2 Lec.	Prac.	Term 3 Lec.	Prac.	Hours
11.910G	History of Landscape Design	1	0	1	0	0	0	21
25.531	Geology for Engineers*	1	2	1	2	1	2	90
11.911	Botany and Ecology*	1	2	1	2	1	2	90
11.912G	Landscape Engineering	0	0	0	0	2	0	18
		3	4	3	4	4	4	219

	Year II	Term 1 Lec.	Prac.	Term 2 Lec.	Prac.	Term 3 Lec.	Prac.	Hours
11.913G	Theory and Practice of Landscape	1	0	1	0	1	0	30
11.914	Forestry and Horticulture*	2	1	2	1	2	1	90
11.915G	Landscape Design	0	3	0	3	0	3	90
		3	4	3	4	3	4	210

*Practical work in Geology, Botany and Forestry will include a number of Saturday excursions.

Enquiries

Initial enquiries regarding post-graduate courses should be addressed to:

The Dean,
School of Architecture and Building,
University of New South Wales,
P.O. Box 1,
Kensington,
New South Wales, Australia.

Student Facilities

THE ARCHITECTURE CLUB

Students of the School of Architecture and Building are encouraged to participate in extra-curricular activities through the Architecture Club, of which they automatically become members immediately upon registration. The Club, commonly known as T.A.C., is affiliated with the Australian Architectural Students' Association, with the International Union of Architectural Students, and is currently leading a movement to form a graduate club of architects, artists and sculptors with headquarters in the city.

In addition to sending representatives interstate and overseas, T.A.C. arranges outings, social functions and lectures, and produces both a broadsheet each week and a magazine, "Atelier", each term. It commands the enthusiastic support of all students, and provides a common interest which is invaluable in creating a school spirit.

THE UNIVERSITY OF NEW SOUTH WALES' STUDENTS' UNION

The Students' Union is the parent student organisation within the University and membership is compulsory for all registered students. It provides a wide range of cultural societies, of social facilities as well as producing a bi-weekly journal. The annual subscription is £2.

SPORTS ASSOCIATION

In December, 1952, the University Council approved the establishment of the Sports Association as the organisation to control and sponsor sporting activities within the University.

Some 20 clubs provide a wide variety of sporting activities. Membership is compulsory for all registered students, the annual subscription being £1.

UNIVERSITY REGIMENT

The University Regiment is organised basically as an infantry battalion. Enrolment is voluntary and recruits sign on for a period of two years, during which 14-day camps are held in January-February. Enquiries should be directed to the Adjutant or Regimental Sergeant-Major, Regimental Headquarters, Day Avenue, Kensington.

SYDNEY UNIVERSITY SQUADRON

The Sydney University Squadron, a Citizen Air Force Unit of the R.A.A.F. is established for voluntary enlistment of one hundred undergraduates of the University of New South Wales and the University of Sydney. Annual training is organised to fit in with faculty activities and consists of lectures on Air Force organisation, law and administration, and appropriate technical and

specialist subjects applicable to the medical, technical, radio, works and administrative flights. Enquiries should be addressed to the Commanding Officer, Sydney University Squadron Headquarters, cnr. City and Darlington Roads, Darlington. Tel. 51-4664.

RESIDENTIAL COLLEGES

Basser College, the first residential college of the University, is situated in High Street, Kensington, and provides accommodation for 210 male students.

Post-Graduate Hall can accommodate a limited number of post-graduate students.

Phillip Goldstein Hall consists of three buildings — two residential blocks (one for men and one for women), and a dining hall.

Fees

Basser College: Registration fee (on entry), £10; Board and residence (including laundry), £87/10/- per term of 10 weeks; Deposit on furnishings (refundable at end of year), £5; Residence during vacations and examinations, £8/15/- per week; Charge for electricity during second term, £5; Student's house fee (including ticket for Annual Ball), £5/10/- per annum.

Post-Graduate Hall and Phillip Goldstein Hall: Except for minor variations, the fees of these residences are the same as those for Basser College.

LIBRARY

The University Library provides a reference and lending service for staff and students, and is open in term during day and evening sessions. Library services are also available to students at Broadway, Broken Hill and Wollongong.

STUDENT COUNSELLING AND RESEARCH UNIT

The Student Counselling and Research Unit is located at Kensington and is normally open from 9 a.m. to 9 p.m. daily. Students wishing to avail themselves of this advisory service should arrange an appointment by 'phoning 663 0351 ext. 2600 - 2605.

STUDENT EMPLOYMENT SERVICE

The Student Employment Service offers assistance in finding suitable full-time, casual or vacation employment during university training. It will also advise on Cadetships and permanent career employment. The service is located in the Main Building, Kensington, and is open 9 a.m. - 5 p.m. daily. Telephone 663 0351.

STUDENT HEALTH SERVICE

A free health service under the direction of a qualified medical practitioner is available to all students during office hours. The service is primarily diagnostic and not intended to replace the students' private doctor or the community health services available. Appointments may be arranged by personal contact or by telephoning 663 0351 ext. 2679.

Scholarships, Bursaries and Cadetships

UNIVERSITY SCHOLARSHIPS

The University offers the following scholarships:

(1) For students who have completed Trade Courses (Department of Technical Education).

Ten scholarships tenable in degree or diploma courses may be awarded annually to students who have completed a trade course and have qualified for admission to a degree or diploma course within three years of the completion of the trade course. The scholarships shall be awarded on the results of the examination qualifying for entrance.

(2) For part-time students who have taken the Qualifying and Matriculation course of the Department of Technical Education.

Ten Scholarships tenable in degree or diploma courses may be awarded annually to part-time students who have taken the Qualifying and Matriculation course of the Department of Technical Education, the awards to be made on the results of the Leaving Certificate Examination.

(3) For candidates at the Leaving Certificate Examination.

Fifteen scholarships tenable in degree or diploma courses may be awarded annually on the results of the Leaving Certificate Examination.

The scholarships shall be awarded under the following conditions:

(a) A scholarship holder shall be eligible for enrolment in the course selected and will be exempt from payment of University course fees during the currency of the scholarship.

(b) A student may hold only one scholarship at a time.

(c) The University shall have the power to withhold the award of any scholarship if the applicants are of insufficient merit.

(d) Any scholarship may be withdrawn if the progress or conduct of the holder is unsatisfactory.

(e) The holder of a scholarship in any course of part-time instruction must be actively engaged in the relevant trade or profession for which the course has been established.

(f) A scholarship that has been forfeited or withdrawn may be offered to another candidate.

(g) Only results obtained in the year in which the scholarship competitions are conducted may be considered.

(h) Scholarships available on the Leaving Certificate Examination will be awarded in order of merit as shown by the highest aggregate marks in six papers, including those specified for the particular scholarships.

(i) Scholarships available to students who have taken the Qualifying and Matriculation course of the Department of Technical Education will be open only to candidates at the Leaving Certificate Examination who have been bona fide part-time students during the year in which they have taken the examination and shall be awarded in order of merit as shown by the highest aggregate marks in five papers.

Applications for these scholarships, on forms obtainable from the Registrar, must be lodged with the Registrar after publication of examination results and the announcement of the award of Commonwealth Scholarships but not later than 31st January each year.

COMMONWEALTH SCHOLARSHIPS

Commonwealth Scholarships are available for first degree or diploma courses which are approved under the Commonwealth Scholarship Scheme. Benefits are available for both pass and honours courses.

Eligibility

Candidates must meet certain requirements in respect of age, residence and academic qualifications as set out below.

Candidates who hold other awards which involve a bond or who already hold a tertiary qualification in one of the courses approved under the Commonwealth Scholarship Scheme are ineligible.

Types of Scholarships

There are three types of scholarships:

(a) Open Entrance Scholarships: These are awarded on the results of the Leaving Certificate Examination to students who are under 25 years of age on 1st January of the year in which the course is commenced and are available for full-time or part-time courses. In general the applicant and both parents must be permanent residents of Australia or its external or trust territories. Scholars who have migrated alone or with one parent only may be considered as special cases.

(b) Scholarships for the second or later years of a course: Full-time students who have completed at least the first year of their course without failure are eligible to apply.

Part-time students must have completed, without failure, at least the first two years of their part-time course equivalent to one year of full-time study. Applicants who intend to proceed full-time are given preference over those who intend to proceed part-time.

Scholars who have had failures in the first year of a full-time course, or in the first two years of a part-time course, are not eligible for a Second or Third Year Scholarship but they may apply for a Fourth Year Scholarship if they have retrieved their failure and maintained satisfactory progress in the second and third years of the course.

Age and residential qualifications are the same as for Open Entrance.

(c) Mature Age Scholarships: Applicants for these scholarships who desire to commence a course must be over the age of 25 years and under the age of 30 years on 1st January of the year for which the scholarship is desired. Applicants who have completed part of the desired course must have been under 30 years of age on 1st January of the year in which they commenced their course, and must be over the age of 25 years on or before 1st January of the year to which their scholarship will be applied.

Candidates must have lived in Australia for at least two years immediately preceding the award of the scholarship, and must intend to remain in this country permanently. Mature age scholars must study on a full-time basis.

Benefits

Scholars receive the following benefits:

(a) tuition fees;
(b) examination fees;
(c) matriculation fees;
(d) degree fees;
(e) other compulsory fees such as Library fee, Union fees, Sports Union fees and non-refundable laboratory fees.

Note: The cost of instruments, books, excursions or accommodation is not covered.

Living Allowance

Full-time students may apply for a Living Allowance, which is subject to a means test. The maximum allowances are £247 p.a. for students living at home and £383/10/- p.a. for students living away from home.

Applications

The closing date for applications for Commonwealth Scholarships is 30th September of the year immediately preceding the year for which the scholarship is desired. Applications for renewal of scholarship must be made before 31st October each year. Further information, application forms and the Commonwealth Scholarship Handbook may be obtained from the Officer in Charge, University Branch Office, Department of Education, University Grounds, University of Sydney, Sydney.

BURSARIES AWARDED BY THE BURSARY ENDOWMENT BOARD

A number of Bursaries tenable at the University are awarded to candidates of merit at the Leaving Certificate Examination whose family income falls within certain limits prescribed by the Bursary Endowment Board.

Applications should be made to the Secretary, Bursary Endowment Board, C/- Department of Education, Bridge Street, Sydney.

COMMONWEALTH SERVICE CADETSHIPS

The Commonwealth Public Service each year offers cadetships tenable in certain undergraduate courses at the University in order to enable selected employees in its service to obtain professional qualifications. British subjects with Australian citizenship, under the age of 28 years, are eligible to apply.

During the training period the cadet receives the following salary:

	Male	Female
Under 18 years	£621 p.a.	£572 p.a.
At 18 years	£736 p.a.	£644 p.a.
At 19 years	£849 p.a.	£720 p.a.
At 20 years	£977 p.a.	£802 p.a.
At 21 years	£1,055 p.a.	£854 p.a.
At 22 years	£1,116 p.a.	£915 p.a.
At 23 years	£1,177 p.a.	£976 p.a.
With increments to	£1,360 p.a.	£1,159 p.a.

Fees are refunded to the cadet on a proportionate basis according to his salary: less than £1,055, 100% refund; £1,055 to £1,115, 75%; £1,116 to £1,176, 50%; £1,177 to £1,237, 25%; £1,238 or more, nil.

Applicants must have passed the Leaving Certificate or equivalent examination with passes in English, Mathematics and Physics, and they will be required to enter into a bond undertaking to remain in the Commonwealth Public Service for a period of up to five years after graduation. Either full-time or part-time courses may be undertaken if available.

Cadetships are available from time to time in the fields of engineering, biochemistry, science and architecture.

Details of vacancies at any one time may be obtained from the University's Student Employment Officer or the Employment Officer, Commonwealth Public Service Inspector's Office, Commonwealth Centre, Chifley Square, Sydney. Telephone 28 5701.

W. J. McIVER SCHOLARSHIP

The W. J. McIver Scholarship is open to students who qualify at the annual examinations for admission to the Fifth Year Honours course in Architecture. The scholarship provides a living allowance of at least £100 p.a. payable in term instalments.

Applications must be made on the approved form and lodged with the Registrar not later than 15th **January each year.**

UNDERGRADUATE PRIZES

Architecture Degree Course				
Marley Reliance Industries Pty. Ltd.	£25	0	0	Best student, Year I.
Dunlop Rubber Aust. Ltd.	£26	5	0	Best student, Year III.
Board of Architects of N.S.W.	£10	10	0	Best graduate in professional subjects of final 2 years of course.
James Hardie & Co. Pty. Ltd.	£50	0	0	General excellence in the architectural subjects of the course.
*W. A. Nelson	£30	0	0	Best specific studio project in Year IV.†
*Frank W. Peplow	£12	0	0	Best student in ecclesiastic architecture.
*Royal Australian Institute of Architects, N.S.W. Chapter	£25	0	0	Excellence in Design and allied subjects in final 2 years of course.
Building Degree Course				
James Hardie & Co. Pty. Ltd.	£20	0	0	Best student, Year I.
*Master Builders' Association of N.S.W.	£100	0	0	To be allocated at the discretion of the Head of the School.
*William King McLean	£2	2	0	Best student in Building Construction and Structures in first 3 years of course.
General				
Chamber of Manufactures of N.S.W.	£5	0	0	To be awarded at the discretion of the Head of the School.

*Open to students of the corresponding Diploma course.

†Bi-annual prize, first awarded in 1965, upon a project executed during 1964.

POST-GRADUATE AWARDS

Byera Hadley Travelling Scholarship

The Byera Hadley Travelling Scholarship is open to graduates in architecture of the University of New South Wales and Associates of the Sydney Technical College. Candidates must be British subjects.

The scholarship is to assist the holder to proceed overseas and remain abroad for not less than one year and not more than three years. Value £600.

Byera Hadley Travel Grant

The Byera Hadley Travel Grant is open to graduates in architecture of the University of Sydney or the University of New South Wales and Associates of The Sydney Technical College. All candidates must be British subjects. The grant is to assist the holder to travel and undertake a course of study. Value £300.

Board of Architects of New South Wales Travelling Scholarships

The Board of Architects of New South Wales offers two scholarships annually to holders of an architecture degree from the University of Sydney or the University of New South Wales, or the diploma in Architecture of the Sydney Technical College, or to architects registered in the State of New South Wales. All candidates must be British subjects.

The scholarships are to assist the holders to proceed overseas and remain abroad for not less than twelve months and not more than three years. Value of each scholarship, £300.

Closing dates for applications and further details are available upon request from the Head of the School.

Sir Manuel Hornibrook Travel Grant

The Sir Manuel Hornibrook Travel Grant is open to Licentiate or Student members of the Australian Institute of Builders, from whom the Council of the Institute may invite applications in each alternate year.

The object of the Travel Grant is to advance the study and practice of building by competition for the award, and by subsequent travel overseas or interstate. The Travel Grant shall be of such value as the Council may from time to time determine. Details are obtainable from the Australian Institute of Builders, N.S.W. Chapter.

Morrow and Gordon Scholarship

This scholarship is designed to assist a graduate undertaking post-graduate training within the school. Value £150.

Further details of this scholarship may be obtained on application to the Head of the School.

Descriptions of Subjects

The following brief synopses are intended to outline the scope of individual subjects within the architecture and building undergraduate courses. A list of recommended text and reference books succeeds each subject.

11.011H/I History of Fine Arts A

(A course for students in the Faculty of Architecture)

The lectures in this course are devoted to the history of painting, sculpture and allied arts and will be illustrated by slides of characteristic examples of the major art epochs discussed. The intention is to enable the student to appreciate a work of art in terms of its historical period and the characteristic qualities produced by determining factors of the age. Also it is intended to help him to analyse and appreciate the formal values and intrinsic style of such a work and to enjoy it.

Text Book

Lake & Maillard – *Dictionary of Modern Painting* (Text by various authorities.)

Reference Books

Newton, E. — *European Painting and Sculpture.*

Gardner, H. — *Art Through the Ages,* 1935 edition, general reference.

Bazin, G. — *A Concise History of Art.*

Rewald — *The History of Impressionism.*

Rewald — *Post Impressionism, from Van Gogh to Gauguin.*

Brion, M. — *Art Since 1945* (text by various authorities.)

Seuphor — *A Dictionary of Abstract Painting* (text by various authorities.)

Read, Herbert — *The Meaning of Art.*

Ragnar, M. — *Modern Painting* (Skira.)

Vasari — *Lives of Painters, Sculptors and Architects.*

Richter — *The Sculpture and Sculptors of the Greeks.*

Berenson — *Italian Painting of the Renaissance.*

Burchhardt — *The Civilisation of the Renaissance in Italy.*

Venturi — *A Short History of Italian Art. Painting and Sculpture of Michelangelo* (a Phaidon edition.) *Byzantine Painting* (a Skira volume.)

Alsopp, Bruce — *General History of Architecture* (Pitman.)

Hamlin, A. D. F. — *History of Architecture* (Longmans Green.)

Statham, H H. — *History of Architecture,* 3rd Ed. 1950, (B. T. Batsford.)

Pevsner, Nikolaus — *Outline of European Architecture* (Penguin Books.)

Fletcher, Sir Banister — *History of Architecture on the Comparative Method* (B. T. Batsford.)

Summerson, Sir John — *Architecture in Britain, 1530 - 1930.*

Hitchcock, Henry Russell — *Architecture, 19th and 20th Centuries.*

DESIGN

This range of subjects is the core of the syllabus and embodies and applies all the subject matter of the other lectures and studies in the Architecture course. Design includes planning, construction, specialised building techniques, engineering services and equipment, specification, estimating and building job supervision and control.

The whole design course consists of a series of lectures and practical problems in the studio and at home in part-time periods, generally accenting fundamental aesthetic and technical points but with problems interspersed expressly to stimulate imaginative thinking. Throughout the design course, frequent quick esquisse problems are given ranging from the practical to the abstract.

In all problems structure and construction are considered an essential part of design. In many cases special or unusual points in design are required to be substantiated by drawn details of construction. The extent to which competence in structures, construction and other specialist subjects is expected in design at any stage is dependent on the depth reached in these subjects at that stage. Specific problems are set throughout the course to ensure thorough integration in design at the appropriate level of the important related subjects. As often as possible the problems are set on actual sites and involve consideration of environment.

All work is marked by a jury, with class criticism and discussion.

11.111 Design I

A course of illustrated lectures through the year to introduce the student to the field of design, and its importance in man's environment, especially in all his building.

In early lectures, the design elements are discussed and the principles of composition studied mainly as applied to two-dimensional composition. The later and greater part of the first year lecture course is given over to appreciation of visual things from the broad down to detail. The purpose here is twofold: firstly, to observe the application of the above principles, and secondly to provide, as far as possible, a background of visual experience to aid in the students' development in design in general, and in architectural design in particular. From the start emphasis is placed upon the greater importance of the whole over the part, and the contribution made by the parts to the whole.

The visual subjects covered range from natural landscape, through large engineering works, cities, towns and buildings in the landscape; the city; the town; buildings, etc., down to common equipment and hardware.

The practical application of the principles in two-dimensional composition is handled in Architectural Drawing I.

11.112 Design II

Lectures on principles of architectural composition. An introduction to various theories of art and hence to the development of one theory with the purpose of raising the problems involved in all theories. This is followed by a study of various types of architectural designing in the light of the points raised.

Studio exercises are given in the principles of architectural design starting with three-dimensional non-functional compositions progressing to three-dimensional problems with a simple function and finally to small simple architectural design problems.

11.112/1 and 11.112/2 Design II, Parts A and B

The subject 11.112 Design II is taken by part-time students over two years.

11.113 Design III

Lectures on the broad factors influencing architectural design: people, climate, topography, materials, economics, social system, etc. Atmosphere and character. Expression of function, structure and materials. Relationship in massing and details. The importance in architecture of space as well as mass. Design and equipment of external spaces; elementary landscape study. The design of building groups; elementary town design. Architectural problems in "detailing". Planning and approach to an architectural problem.

Throughout the year the majority of problems are set to free the imagination and to emphasise the primacy in architecture of the overall concept in the realms of purpose, structures, form and character. In these exercises no precision is expected in planning, structure or construction, though the broad planning and structural concepts are expected to be sound.

Two or three problems are given specifically to bring together architectural design and the technical and practical subjects studied separately. These problems involve design under the discipline of realism. Structure, construction, building science, etc., are justified by calculation, detailed drawings or reports, and a problem carried through to working drawings.

Real sites are generally adopted. The essential relationship between building, site and environment is emphasised from the beginning.

At least twelve short esquisse problems are given throughout the year on stimulating and varied topics.

The development of presentation techniques acquired in previous years is encouraged, especially in the conceptual and esquisse design work.

11.113/1 and 11.113/2 Design III, Parts A and B

The subject 11.113 Design III is taken by part-time students over two years.

11.114 Design IV

Studio assignments on the design of buildings progressively becoming more intricate in planning and taken to a somewhat further stage of completeness in overall design, detailed planning and a consideration of structure, construction and materials.

Imaginative approach to all problems is sought. By the end of the year structures are expected to be reasonable in concept, and construction and materials may be required to be clarified in large-scale details.

Some lectures are given on furniture and interior decoration, including the aesthetics of interior finishes, furniture, furnishings, colour and texture, and one or two of the design problems include design experience in this field.

Where possible problems are set for actual sites.

Two or three times a year a seminar, debate or lecture is held on a theoretical or philosophical topic.

11.115 Design V

In the first part of the year problems are undertaken in advanced planning, involving considerable traffic, both vehicular and pedestrian, planning for typical industrial processes, commercial buildings, housing work, etc. Associated questions of economics, structure, mechanical equipment and services are studied. Some of the later problems are given to introduce urban design and some serious study on the design of environment.

Throughout this year the aim is the correlation of all major aspects of the design of buildings, that is practical planning, structure, construction, economy and the provision of fine human environment.

11.116 Design V (Hons.)

In addition to the work covered under 11.115 Design V, in this subject research and practical problems are carried out, usually relating to improvement and re-development from a planning and architectural point of view, of parts of existing cities, such as Sydney and Newcastle and large country towns.

Civic surveys are made of the actual areas and all relative information is obtained by the students generally with the support of town planning officials in the city concerned. A limited number of visits and criticisms are made by the Professor of Town and Country Planning of the University of Sydney discussing the work of the students in the principles and problems of civic architecture.

Reference Books (Design I to Design V)

Brockman, O. — *Good and Bad Taste.*
Read, H. — *The Meaning of Art.*
Rathbone, R. A. — *Introduction to Functional Design.*

Graves, M. — *Colour Fundamentals.*
Evans, R. M. — *An Introduction to Colour.*
Kepes, G. — *The Language of Vision.*
Woodworth, R. S. — *Psychology.*
Science News No. 22.
Scott, R.G. — *Design Fundamentals.*
Moholy-Nagy, L. — *Vision in Motion.*
Giedion, S. — *Space, Time and Architecture.*
Towndrow, F. E. — *Architecture in the Balance.*
Zevi, Bruno — *Towards an Organic Architecture.*
Newtown, N. T. — *An Approach to Design.*
Gill, Eric — *Beauty Looks After Herself.*
Teague, W. D. — *Design This Day.*
Raskin, Eugene — *Architecturally Speaking.*
Russell, G. — *The Things We See* (Series — Furniture.)
Hollowood, B. — *The Things We See* (Series — Pottery & Glassware.)
Gibberd, F. — *Town Design.*
Sharp, T. — *Oxford Replanned.*
Brown, A. J. and Sherrard, H. M. — *Town and Country Planning.*
Forshaw, J. H. and Abercrombie, L. P. — *County of London Plan.*
Rasmussen — *Towns and Buildings.*

HISTORY OF ARCHITECTURE

This is one of the basic subjects leading to Architectural Design. Students of architecture should obtain some knowledge of past systems of building, use of materials, and the principles of design for purpose and beauty. The subject is treated in a general manner, but certain buildings and other works of construction are examined analytically, the approach being critical rather than archaeological. Research assignments or examinations are required in each term of each year.

11.121 History of Architecture I

A general outline survey of construction and architecture from the earliest times to the present day, related to chronological periods, countries and styles — from ancient Egyptian up to modern contemporary architecture.

11.122 History of Architecture II

Beginning with the Graeco-Roman classic period the pagan precedents of Christian architecture are examined, then the following periods or styles in convenient order: Early Christian, Byzantine, Romanesque and Gothic. The major points for analysis are the abstract beauty of Greek architecture; the building methods and monumental works of the Romans and the rise and evolution of Christian ecclesiastical buildings from Early Christian to Gothic. Analytical consideration will be given to walls, columns, piers, arches, vaults, domes, buttresses, towers, spires, the mediaeval "unit-bay" system of design, decoration, monasteries, castles, manors and other dwellings.

11.123 History of Architecture III

The architecture of Europe from the Renaissance to the present day. Beginning with the revival of antique art in Italy, the course of the Renaissance is traced through Europe to England. The period of revivals, mediaevalism, and the eclectics. The impact of the Industrial Revolution and the emergence of the engineer. New materials and techniques — iron, steel, concrete, glass. The development of town planning.

11.124 History of Architecture IV

The history of architecture in Australia, particularly the evolutionary development of regional architectural expression.

The search for a new architecture in Germany, France and America in the last quarter of the 19th century and its fulfilment in the 20th century. Particular emphasis is placed on developments during the period following the Second World War to the present time.

Text Books (History of Architecture I - IV)

1. Fletcher, Banister — *A History of Architecture* (Batsford.)
   or Statham, H. H. — *A History of Architecture* (Batsford.)
   or Allsop, Bruce — *A General History of Architecture.*
2. Pevsner, Nicolaus — *An Outline of European Architecture* (Pelican.)

Reference Books (History of Architecture I - IV)

1. General —
   Wells, H. G. — *A Short History of the World* (Pelican.)
   Mumford, Lewis — *The City in History* (Secker & Warburg.)
   Zevi, Bruno — *Architecture as Space* (Horizon.)
   Giedion, S. — *Space, Time and Architecture* (Harvard U.P.)
   Jordan, R. Furneaux — *European Architecture* (Thames & Hudson.)
   Lavedan, Pierre — *French Architecture* (Pelican.)
   Briggs, Martin — *The Architect in History* (Clarendon Press.)
   Oldham, J. & R. — *Western Heritage.*
   Gardner, A. H. — *Outline of English Architecture* (Scribner's Sons.)
2. Ancient Architecture —
   Breasted, J. H. — *Ancient Times* (Gunn.)
   Stevenson Smith, W. — *Art and Architecture of Ancient Egypt* (Pelican History of Art.)
   Edwards, I. E. S. — *The Pyramids of Egypt* (Pelican.)
   Woolley, Leonard — *Ur of the Chaldees* (Pelican.)
   Piggott, Stuart (Ed.) — *The Dawn of Civilisation* (Thames & Hudson.)
3. Classic Greek and Roman —
   Kitto, H. D. F. — *The Greeks* (Pelican.)
   Barrow, R. H. — *The Romans* (Pelican.)
   Robertson, D. S. — *A Handbook of Greek and Roman Architecture* (Cambridge.)

4. Early Christian to Medieval —

Power, Eileen — *Medieval People* (Pelican.)
Rice, David T. — *Byzantine Art* (Pelican)
Busch & Lohse (Ed.) — *Romanesque Europe* (Batsford.)
Busch & Lohse (Ed.) — *Gothic Europe* (Batsford.)
Harvey, John — *The Gothic World* (Batsford.)

5. Renaissance to Industrial Revolution —

Burckhardt Jacob — *The Civilisation of the Renaissance in Italy* (Phaidon.)
Anderson & Stratton — *Architecture of the Renaissance in Italy* (Batsford.)
Wittkower, Rudolph — *Art and Architecture in Italy: 1600 - 1750* (Pelican History of Art.)
Wittkower, Rudolph — *Architectural Principles in the Age of Humanism* (Tiranti.)
Scott, Geoffrey — *The Architecture of Humanism* (Doubleday.)
Blomfield, Reginald — *Architecture of the Renaissance in England* (Bell.)
Plumb, J. H. — *England in the Eighteenth Century* (Pelican.)
Richardson, A. E. — *Georgian Architecture* (Art & Technics.)
Allsop, Bruce — *A History of Renaissance Architecture* (Pitman.)
Busch & Lohse (Ed.) — *Renaissance Europe* (Batsford.)

6. 19th and 20th Centuries —

Hitchcock, Henry - Russell — *Architecture, 19th & 20th Centuries* (Pelican History of Art.)
Pevsner, Nicolaus — *Pioneers of Modern Design* (Pelican.)
Richards, J. M. — *An Introduction to Modern Architecture* (Pelican.)
Joedicke, Jurgen — *A History of Modern Architecture* (Architectural Press.)
Banham, Reyner — *Guide to Modern Architecture* (Architectural Press.)
Banham, Reyner — *Theory and Design in the First Machine Age* (Architectural Press.)
Kidder-Smith, G. E. — *The New Architecture of Europe* (Pelican.)
Turner, Reginald — *English Architecture in the 19th Century.*

7. Australian Architecture —

Barnard, Marjorie — *Australian Outline* (Ure Smith.)
Boyd, Robin — *The Walls Around Us* (Cheshire.)
Boyd, Robin — *Australia's Home* (Melbourne U.P.)
Herman, Morton — *The Early Australian Architects and Their Work* (Angus & Robertson.)
Herman, Morton — *The Blackets* (Angus & Robertson.)
Bunning, Walter — *Homes in the Sun* (W. J. Nesbit.)
Casey, Maie & others — *Early Melbourne Architecture* (Oxford.)
Sharland, Michael — *Stones of a Century* (Oldham, Beddome & Meredith.)

Robertson, E. G. — *Victorian Heritage* (Georgian House.)

Robertson, E. G. — *Sydney Lace* (Georgian House.)

Royal Australian Institute of Architects, Queensland Chapter — *Buildings of Queensland* (R.A.I.A.)

Smith, Roy — *John Lee Archer* (Tasmanian Historical Research Association.)

11.131 Drawing I

The subject encompasses all types of drawing used in the practice of architecture. Practical work in various media is intended to develop perception and observation and skill in delineation. For purposes of teaching and studio arrangements the subject matter is dealt with under three main categories:

Freehand: The range of work covers elementary freehand drawing and includes quick sketching, outdoor sketching, memory drawing and free perspective drawing.

Descriptive Geometry: This subject provides an introduction to general draughtsmanship and consists of lecture-demonstrations, followed by drawing, in the following: exercises in line drawing and plane geometry; lettering; orthographic, isometric, oblique, axonometric projection; theory of perspective, exteriors, interiors, inclined planes; shadows cast by geometrical features and simple architectural subjects on vertical and horizontal planes; shadows in perspective; solid geometry; development of intersections and surfaces; roof developments and layout; graphic symbols.

Architectural: This range of work introduces the student to the conventional forms of architectural drawing: scale drawing, architectural sketching, presentation, rendering, sciagraphy, etc.

The student will have the discipline of drawing and rendering precisely architectural forms that are themselves precise, e.g., one or more of the Orders of Architecture. He will be taught the different drawing techniques of the esquisse, the more formal sketch design, correct presentation, working drawing conventions and indications, detailed drawing, and architectural perspective, techniques and effects in presentation. There will be some elementary exercises in general design.

11.131/1 and 11.131/2 Drawing I, Parts A and B

The subject 11.131 is taken by part-time students over two years.

Drawing IA comprises Freehand Drawing and Descriptive Geometry; Drawing IB comprises Architectural Drawing.

11.132 Drawing II

A continuation and extension at a higher level of the methods, media and techniques begun in Drawing I in Freehand and Architectural Drawing, concentrating on architectural sketch presentation.

11.132/1 and 11.132/2 Drawing II, Parts A and B

The subject 11.132 is taken by part-time students over two years.

Drawing IIA comprises Freehand Drawing and Drawing IIB comprises Architectural Drawing.

Text Book (Descriptive Geometry)

Lee, L. A. & Reekie, R. F. — *Descriptive Geometry for Architects and Builders.*

Reference Books (Descriptive Geometry)

Dept. of Labour & National Service — *Practical Geometry.*
Reekie, R. F. — *Draughtsmanship.*
Faulkner, R. M., Ziegfield and Hill — *Art Today.*
Pare, E. G., Loving, R. O., & Hill, I. L. — *Descriptive Geometry.*
Holmes, J. — *Applied Perspective.*
Hollis, H. F. — *Perspective Drawing.*
Nichols and Keep — *Geometry of Construction.*
Abbott — *Descriptive Geometry and Engineering Graphics.*

Text Books (Architectural Drawing)

Bostock, J. — *Roman Lettering for Students.*
Reekie, R. F. — *Draughtsmanship.*

Reference Books (Architectural Drawing)

Rathbone, R. A. — *Introduction to Functional Drawing.*
Kepes, G. — *The Language of Vision.*
Graves, Maitland — *The Art of Colour and Design.*
Evans, R. M. — *An Introduction to Colour.*
Scott, R. G. — *The Studio Book of Alphabets.*
Halse, A. O. — *Architectural Rendering.*
Teague, W. D. — *Design This Day.*
Atkin, Corbelletti & Fiore — *Pencil Techniques in Modern Design.*
Myerscough-Walker — *The Perspectivist.*
Edwards & Farey — *Architectural Drawing and Perspective.*
Ramsden, E. — *Sculpture, Theme and Variation.*
Moholy-Nagy — *Vision in Motion.*
Valentiner, W. R. — *Origins of Modern Sculpture.*

11.141 Architectural Research

Architectural research is concerned with the study of buildings of architectural merit and of historic significance.

Working in a group the student is called upon to do field investigations and prepare measured drawings. Concurrently with historical research the students prepare submissions which are intended to be lodged with the Mitchell Library.

Each student is also required to conduct an investigation, write a report, and present an address to his fellow students and to take part in general discussion.

11.142 Research Thesis

During this period, the student is encouraged to study some specialised aspect of architectural planning and research, such as the latest developments in structural design or the engineering services of buildings, or specialised planning and equipment of buildings, such as hospitals, schools, etc. Some of this advanced study may be relative to the design projects being carried out under the heading of architectural design and construction, civic architecture or town planning, or the student may, with the approval of the Professor, pursue some avenue in scholarship, such as the literature of architecture, aesthetics or history, or the problems of architectural administration, professional practice, etc. This work will be embodied in a thesis to be submitted by the student within one of the following fields: (a) Architectural Design, (b) Building Science, (c) Administration. Each student has a supervisor to advise on reading, lines of investigation, etc.

CONSTRUCTION

Construction is the study of the material elements and procedures which are involved in the erection of buildings.

From a consideration of the systems of construction in common use in domestic buildings the student progresses to the study of framed, multi-storey and shell buildings.

Visits to factories and buildings under construction are arranged throughout the course.

11.211 Construction I

Lectures: Building materials, elements of construction, components of buildings and their functions in simple domestic constructions. Building sites and trade practices.

Practical: Drawn details and contract drawings of work treated in lectures. Methods of transmitting requirements by detail and specification clauses.

Text Books

C.E.B.S. Notes in the Science of Building I — Latest issue.

Local Government Ordinance No. 71 — Sydney Corporation Act By-Laws 51 - 58 incl.

Mitchell, G. A. — *Building Construction Elementary Course.*

Sharp, W. — *Australian Methods of Building Construction.*

S.A.A. Code A.S. No. C.A.25 - 1955 — *Architecture and Building Drawing Practice.*

Reference Books

McKay, W. B. — *Building Construction* (Vols. I - IV)

Mackey, G. F. — *Gregory's Modern Building Practice in Australia.*

Nangle, J. — *Australian Building Practice.*

De Mare, E. — *New Ways of Building.*

H.M.S.O., D.S.I.R. — *Principles of Modern Building* (Vol. 1).

Nield, D. — *Walls and Wall Facing.*

Shute, M. A. — *Modern Building Materials.*

Gay, G. M. and Parker, H. — *Materials and Methods of Building Construction.*

Field, J. E. and Stillman, J. — *Design and Practice of Joinery.*

11.212 Construction II

Lectures: Requirements of buildings of two-storey load-bearing construction, domestic and industrial, in masonry and structural timber. Basement construction, elementary construction in structural steel and concrete.

Practical: Construction details illustrating selected work in lectures. Design of construction elements with specifications. Details of selected work designed in Structures II.

11.212/1 Construction IIA; 11.212/2 Construction IIB

These courses together are similar to 11.212 Construction II but taken over two years on alternate weeks. Construction IIA is the first year section. Construction IIB is the second year section. The examination in Construction II is taken at the end of the second year.

Reference Books

Parker, G. M. — *Materials & Methods of Architectural Construction.*

Mitchell, G. A. — *Building Construction (Advanced)* Pts. I & II.

Taylor, S. M., Thompson & Smulski — *Concrete Plain and Reinforced* (Vol. 1.)

Kidder-Parker — *Architects and Builders Handbook.*

Ramsey & Sleeper — *Architectural Graphic Standards.*

Cement & Concrete Association of Australia — *Design, Control and Characteristics of Concrete.*

Davies & Petty — *Building Elements.*

Eastwick-Field, J. and Stillman, J. — *Design and Practice of Joinery.*

H.M.S.O., D.S.I.R. — *Principles of Modern Building* (Vol. 2).
together with Text and Reference Books listed for 11.211 Construction I.

11.213 Construction III

Lectures: Requirements of buildings of single and multi-storey framed construction in steel and concrete. Application of building regulations and cost control factors. Construction erection and supervision methods.

Practical: Problems involving investigation, design and detail of constructions treated in lectures. Details of selected work designed in Structures III.

11.213/1 Construction IIIA

In addition to 11.213 Construction III, additional studies are included as follows:

(a) Building Techniques and Materials — Investigations and analysis of various construction methods and materials. Survey of building projects, and selected field trips. Research, readings and reports in seminars on architectural uses of new materials and structural systems, industrial prefabrication of component parts of buildings.

(b) Specialist Services — Instruction in the specialist services of the various sub-contractors normally engaged in the execution of building construction projects.

(c) Building Analysis Project — Individual projects are directed toward a study of the functional, structural and equipment relationships for various types of building. Approved projects for analysis are selected by the student and are based on construction in progress, or proposed buildings. Special emphasis is placed on the integration of structural, mechanical and electrical systems with each other and with the architectural scheme.

Reference Books

Crane, T. — *Architectural Construction.*

Dunham, C. W. — *Foundations of Structures.*

Huntington — *Building Construction.*

Australian Standard Engineering Drawing Practice, A.S. No. CZ1.

Merritt, F. S. — *Building Construction Handbook.*

Voss, W. C. — *Fireproof Construction.*

Eastwick-Field, J. and Stillman, J. — *Design and Practice of Joinery.*

Hunt, W. D. — *The Contemporary Curtain Wall.*

Commonwealth Department of Works — *Information on the use of Built-up Bituminous Flat Roofs.*

Brinton Carson — *General Excavation Methods.*

Editors of Architectural Record — *Architectural Engineering.*

Oppenheimer, S. P. — *Erecting Structural Steel.*

Peurifoy, R. L. — *Construction Planning, Equipment and Methods.*

Also Reference Books for 11.212 Construction II.

STRUCTURES

Structures I to IV are taken by all students. Structures V is taken by those students who elect to do so.

The first four years cover the major portion of the field of structures as it affects the architect and the builder.

Supplementing the theoretical work there will be exercises in structural design and testing work in the Structures Laboratory.

11.221 Structures I

Elements of structural design, equilibrium, graphical and analytical analysis of forces in pin-jointed structures. Simple beams, moments and shear. Simple rivetted and welded joints.

Text Book

Morgan and Williams — *Structural Mechanics.*

Reference Books

Hirschhorn, J. — *Materials of Structures I.*

Timoshenko, S. & Young, D. H. — *Engineering Mechanics, Pt. I, Statics (4th Edition).*

Olsen, G. A. — *Strength of Materials.*

Singer, F. L. — *Strength of Materials.*

11.222 Structures II

Beam theory, moments and shear analysis, properties of sections, deflection and bending moment, factor of safety. Column theory, slenderness ratio, bending and direct stress. Properties of structural timber, permissable stresses and design. Design of simple footings and gravity retaining walls. Composite beams and columns.

11.222/1 Structures IIA: 11.222/2 Structures IIB

These courses together are similar to 11.222 Structures II but taken over two years on alternate weeks. Structures IIA is the first year section. Structures IIB is the second year section. The examination in 11.222 Structures II is taken at the end of the second year.

Text Books

Cassie & Napper — *Structure in Building.*

Morgan & Williams — *Structural Mechanics.*

Reference Books

B. H. P. Manual of Iron and Steel Products.

S.A.A. Interim Codes 350, 351 and 352.

Handbook of Structural Timber Design Technical Paper No. 32.

Parker, H. — *Simplified Mechanics and Strength of Materials.*
Parker, H. — *Simplified Design of Structural Timber.*
Stewart, D. S. — *Practical Design of Simple Steel Structures* (Vol. 1).
Singer, F. L. — *Strength of Materials.*
Salvadore & Heller — *Structure in Architecture.*

11.223 Structures III

Revision of statics: Forces and structures in space and plane. Statical determinacy. Methods for the solution of space structures. Steel structures: design of beams, columns and joints. Reinforced concrete structures: design of beams and slabs. Continuity: the three-moment equation. Reinforced concrete columns, footings, retaining walls and tanks. Structural design: steel frame industrial buildings; single space frames; reinforced concrete frames and floor systems.

Text Books

Grinter, L. E. — *Elementary Structural Analysis and Design.*
S.A.A. Interim Codes, 350, 351, 352, C.A.2/'58.

Reference Books

Faber & Mead — *Reinforced Concrete.*
Stewart, D. S. — *Practical Design of Simple Steel Structures* (Vols. I and II).
Husband, J. & Harby, W. — *Structural Engineering*
Sutherland, H., & Reece, R. C. — *Introduction to Reinforced Concrete Design.*
B.H.P. Manual of Iron and Steel Sections.
Handbook for Welded Structural Steelwork, the Institute of Welding, London.
Morgan, W. — *Elementary Reinforced Concrete Design.*
Lucy, Thomas A. — *Practical Design of Structural Members.*
Gaylord & Gaylord — *Design of Steel Structures.*
Norris & Wilbur — *Elementary Structural Analysis.*
Robb, Ian — *Steel Frame Design Examples.*
Steel Designers Manual.

11.224 Structures IV

Design of rigid frames and portals by moment distribution, continuity in frames.

Flat slab and flat plate design applications. Comparison of different design methods. Prestressing in structures. Structural considerations of special type buildings integrated with Construction IV. Problems in foundations and soil mechanics.

11.225 Structures V

Introduction to the plastic theory of steel structures; ultimate strength design of reinforced concrete; principles of design of shell roofs, folded plates and suspended structures.

The study of a selected structure or a constructional system by the student, incorporating the preparation of a study report and construction of a scale model to demonstrate structural design principles.

The selection of a further study by the student as a topic by him for lecturette and class discussion.

BUILDING SCIENCE

This subject deals with the application of the methods and findings of science as applied to the problems of the building industry in two principal fields:

(1) Materials. The properties, uses, testing and selection of materials.

(2) Services. The analysis of human requirements and methods for their satisfaction in such fields as heating, ventilation, lighting and acoustics.

At the commencement, emphasis is placed on broad general principles, whilst at later stages certain aspects are studied in more detail and at greater depth.

11.231 Building Science I

Introduction: the scope of Building Science. The scientific method. Units of measurement. Functional requirements of a building: shelter, strength and stability, exclusion of water, durability and weathering, heat and sound insulation, fire resistance.

Porosity and its effects. Chemical action. Testing of materials.

Properties and uses of stone, brick, lime and cement, aggregates, timber and the common metals.

Text Book

Principles of Modern Building, Vol. I. (Her Majesty's Stationery Office).

Reference Books

Geeson, A. C. — *Building Science,* Vols. I and II.
Handisyde, C. C. — *Building Materials.*
Shute, M. A. — *Modern Building Materials.*
Withey, M. A. & Washa, C. W. — *Materials of Construction.*
Knight, B. H. & R. G. — *Builders' Materials.*

11.232 Building Science IIA

Revision of energy units. Electromagnetic radiation. Light and colour, ultra-violet and infra-red radiation.

Climatology, thermal properties of buildings, heat transmission and insulation. Hygrometry and condensation. Solar radiation and sun control. Principles of heating, cooling and ventilating.

Further study of materials; glass, bitumens, rubber, plastics.

Building Science IIB

This subject is taught in the School of Civil Engineering as 8.211 Materials for Architects.

Text Books

Phillips, R. O. — *Sunshine and Shade in Australia.*
Drysdale, J. W.—*Designing Houses for Australian Climates.* C.E.B.S. Bulletin, No. 6.

Reference Books

Billington, N. S. — *Thermal Properties of Buildings.*
Bedford, T. — *Basic Principles of Ventilation and Heating.*
Amer. Soc. of Heating & Ventilating Engineers — Handbook.
Fry, M. & Drew, J. — *Tropical Architecture in the Humid Zone.*
Aronin, J. E. — *Climate and Architecture.*

11.223 Building Science III

Lighting. The eye and vision, analysis of visual tasks.

Photometry and units. Light sources and light control.

Calculation of illumination and flux, and design of lighting installations. Natural lighting.

Acoustics, basic concepts and units. The ear and hearing. Transmission of air-borne and structure-borne sound. Absorption and acoustic materials. Geometrical acoustics, shape of auditoria, echoes. Reverberation and its control. Application to various building types.

Text Books

British Lighting Council — *Interior Lighting Design.*
Paix, D. — *Design of Buildings for Daylighting.* C.E.B.S. Bulletin, No. 7.
Lawrence, A. — *Acoustics in Building.*

Reference Books

Natural Lighting of Buildings, *Daylight Design Diagrams.* Industrial Data Sheets No. L.2.
National Building Studies — *Simplified Daylight Tables* — H.M.S.O.
Walsh, J. W. T. — *Text Book of Illuminating Engineering.*
Stevens, W. R. — *Principles of Lighting.*
Moon, P. & Spencer, D. E. — *Lighting Design.*
Illuminating Engineering Society — Handbook.
Standards Assoc. of Australia — *The Artificial Lighting of Buildings.*
Cullum, D. W. — *Practical Application of Acoustic Principles.*
Knudsen, V. O. & Harris, G. M. — *Acoustical Design in Architecture.*
Constable, J. E. R. & K. M. — *The Principles and Practice of Sound Insulation.*
Ingerslev, F. — *Acoustics in Modern Building Practice.*
Parkin, P. H. & Humphreys — *Acoustics Noise and Buildings.*

11.234 Building Science IV

Building research and research publications. Selected topics of more advanced nature on recent work, by outside specialists where appropriate.

11.235 Building Science V

This subject is an elective, its purpose being to permit a student to study some aspect of building science at greater depth. Lectures on selected topics are supplemented by seminars and group discussions.

Each student selects some topic in Lighting, Acoustics or other approved field for further study. He presents a small paper on the subject which is discussed by the other students and staff.

Where appropriate, laboratory and field investigations are incorporated in the study.

Text Book (Plastics and Laminates)

Couzens, E. C. & Yarsley, V. E. — *Plastics in the Service of Man.*

Reference Books

Building Research Institute, Washington, D. C. — *Plastics in Building.*
Manufacturing Chemists Assoc., Inc., Washington, D.C. — *Technical Data on Plastics.*
Dietz, A. G. H. — *Engineering Laminates.*
McTaggert & Chambers — *Plastic and Building.*

11.241 Building Services A

Principles and practice as controlled by regulation for domestic and commercial building services including drainage, sanitary plumbing, water supply and reticulation, fire services, gas services, hot water service heaters and tanks. Efficiency of units and relative costs are considered.

Text Book

Randerson - *Australian Sanitary Engineering Practice.*

Reference Books

Dept. of Labour & National Service —
(i) *Sanitary Plumbing and Water Supply.*
(ii) *Gasfitting.*
(iii) *Drainage.*

11.242 Building Services B

Design principles and practical requirements of the following services and their application to buildings are studied to provide the architect with sufficient information for sensible selection and inclusion in building projects: heating, ventilating, air-conditioning, electrical services, call systems, fire protection, lifts, steam.

Reference Books

Whitely, R. — *A Guide to Building Services for Australian Architects* U.N.S.W. Union.
Randerson — *Australian Sanitary Engineering Practice.*
Westinghouse Lighting Handbook.
American Society of Heating and Ventilating Engineering Code.
Faber, O. — *Heating and Ventilating* (Spon.).

11.311 Specifications

This subject extends over three terms with lectures in first and second terms, and a specification assignment in the third term.

Details of lecture subjects are as follows: Definitions; historical notes; purpose; legal significance; relationship to building contract; types; uses; aids; sources of information; language; format; reproduction; binding; methods of preparation; schedules; abstracts; "Master" and "Standard" specifications; comparative Australian, British and American examples; supplementary general conditions of "Preamble"; specifications of individual "Trades"; specifications for demolitions; alterations, additions and new works, individual and group.

Reference Books

Edwards, H. G. — *Specifications.*
Eggleston, A. S. — *The Practising Architect.*
Whiting & York — *Specifications.*

11.321 Professional Practice

Subjects dealt with include: law of contracts; relationship of contracting parties and the architect; types of contracts; code of ethics; scale of professional charges; engagement and acceptance of instructions; statutory controls (Acts, Ordinances, Regulations, By-laws, etc.); problems of practice; responsibilities of an architect; office administration; financial aspects (accounts, statements, variations, certificates); supervision.

Correspondence; relationship with specialist consultants; reports (property, dilapidations and project); copyright; insurances; litigation; study of articles of agreement.

Reference Books

Eggleston, A. S. — *The Practising Architect.*
Rimmer, E. J. — *The Law Relating to Architects.*
Turner, H. H. — *Architectural Practice and Procedure.*
Cresswell, H. B. — *Honeywood File. Honeywood Settlement.*
Hudson, A. A. — *The Law of Building and Engineering Contracts.*
R.A.I.A.: *Year Book.*

11.322 Professional Practice (Hons.)

An extension of the subject-matter of Professional Practice concentrating on the business side of the architect's function. Lectures are given by visiting specialists and cover three main fields: (a) Finance — types, sources and methods of finance; the economics and preparation of financial statements on projected schemes, capital costs, maintenance costs, outgoings, revenue. (b) Law — contract, building and industrial laws and regulations. (c) Management — office and personnel management, accounting methods, record systems, job supervision and control, banking procedure.

11.411 Town Planning

The course consisting of one term of lectures and one term of studio work provides an outline of the aims of town and country planning and its relationship to the techniques of architecture, civil engineering, geography, sociology, land economics and land surveying. The course also is preparatory to the post-graduate Diploma course in Town and Country planning conducted by the University of Sydney. The course touches on the history, theory and practice of town and country planning and includes considerations of traffic and transportation, elements of civic design, the planning of residential areas and principles of regional planning.

11.412 Town Planning (Hons.)

Emphasis is placed upon the architectural aspects of town planning with particular reference to requirements in community planning, government housing, residential and estate development.

The subject material of 11.411 Town Planning is extended to emphasise the architectural aspects with particular reference to requirements in community planning, Government housing, residential and estate development.

Text Book

Brown, A J. & Sherrard, H. M. — *Town and Country Planning.*

Reference Books

Abercrombie, Patrick — *Town and Country Planning.*
Gibberd, Frederick — *Town Design.*
Hiorns, F. R. — *Town Building in History.*
Howard, Ebenezer — *Garden Cities of Tomorrow.*
Mumford, Lewis — *The Culture of Cities.*
Tripp, H. A. — *Town Planning and Road Traffic.*
Winston, Denis — *Sydney's Great Experiment.*

11.611 Building Trades I

The general purpose of this subject is to familiarise the student with the materials, tools and terms used by the building craftsman and the inter-working of building trades.

Specialist trade teachers give short lectures and demonstrations in the techniques of bricklaying, carpentry and joinery, plastering, plumbing, drainage and painting.

Each student is required to do some practical work which will include: preparation and mixing of materials; setting out work; laying bricks; jointing and bonding; construction of simple timber frames and methods of "building in"; plain cement rendering to wall surface and "running" plaster moulds; identification of fittings used by the drainer and plumber; practical drainpipe laying; soldering and riveting metal joints; fixing lead flashings; colour mixing; brushwork techniques for applying paint to different surfaces.

11.612 Building Trades II

More advanced work on the trades introduced in Year 1 with emphasis on techniques of workmanship and workshop procedure and practice. Demonstrations, with student participation, of methods of welding and electrical services and fittings. Visits to buildings in course of construction to enable students to observe essential relationships of trades, methods of handling materials and fabrication sequence, provision for "follow on" trades.

11.711 Quantity Surveying A

Instruction in the method of obtaining from plans and specifications and otherwise the quantities of material and labour necessary in the construction of a building and other structures. The use of scales, figures, dimensions, plans, sections, elevations and details in relation to quantities. Techniques used in taking off and billing of quantities.

Text Book

Jack, A. A. & Lamont, J. T. — *Builders' Quantities.*

11.712 Quantity Surveying B

Traditional methods of quantity surveying: Scottish and London methods. Conventional format of bills: provisional and operational bills. Schedule of contracts; variations; progress reports. Professional practice in quantity surveying.

Assignment: Preparation of bill of quantities for a large building project.

11.721 Estimating A

Methods used for estimating; standard mode of measurement; profit; establishment and other on-cost charges; awards, insurance, taxes, etc.; scale of fees and charges by local and other authorities.

The subject matter for each trade or operation includes: current material prices; schedule of labour units. Memoranda in respect to: weights, mixing proportions and yields of materials, waste allowances, working costs and depreciation of plant, scaffolding, etc.; examples of "building up" the elements of a unit cost for pricing a bill of quantities; topical problems in estimating costs of building works.

Measuring and methods of adjusting variations; grouping of unit items to obtain a bulked cost rate for different structural parts of buildings; comparison of costs for alternative methods of construction related to structural parts of buildings; preparation of preliminary estimates from sketch plans.

11.722 Estimating B

Suitability and capacity of on-site plant; organisation as basis for estimating; inspections and reports on actual building sites; examples of "working up" unit cost rates for the various trades and operations on large building projects; pricing selected bills of quantities in respect of domestic, industrial and commercial buildings; recording and adjusting costs of variations to contracts. More advanced work than that given in Estimating A in respect of comparative costs or alternative methods of construction and detailing.

11.723 Estimating

(A course for Architecture students. The syllabus is based on that of 11.721 Estimating A)

Text Book

Thackray, R. N. — *Estimating.*

Reference Books

Foster, Norman — *Construction Estimates from Takeoff to Bid.*
Dallavia, L. — *Estimating General Construction Costs.*

11.731 Building Management

Instruction in the basic practice of a builder's organisation. The subject matter includes:

(a) Elements of job supervision, emphasising the importance of technical supervision in respect to details of construction, fabrication sequence, workmanship standards, general trade practice and teamwork for efficient building construction.

(b) Building job organisation, dealing with the fundamentals of on-site building organisation, economic use of materials and methods of fabrication. The main essentials include on-site planning, problems of labour, materials handling, also construction planning and scheduling.

(c) Building plant and equipment, providing a survey of various power tools, machinery and mechanical handling gear used in connection with building and construction costs.

(d) Business management, which is designed to provide a study in the executive management and basic professional practices of a builder's organisation.

Reference Books

Coombs, W. E. — *Construction Accounting and Financial Management.*
Binder Hamlyn & Co. — *British Construction Equipment.*

11.741 Building Acts and Regulations

Investigations of the Acts, Regulations, By-laws, Codes, etc., which govern and control the design and erection of all classes of building in New South Wales. The lectures deal with:

(a) The method by which the New South Wales Parliament confers powers on various government departments to prepare and police regulations and by-laws, thus controlling building within their jurisdiction;

(b) A general interpretation and knowledge of the contents of the relevant Acts and Regulations.

11.910G History of Landscape Design

Early cultures and their impact upon the primitive landscape through farming, transport and settlement patterns. Religious and social influences as reflected in the design of parks and gardens throughout history. Architectural expression and aesthetic beliefs. The industrial revolution and its effect upon the humanised landscape.

Reference Books

Gothein, Marie Louise — *A History of Garden Art. 2 Vols.*
Clifford, Derek — *A History of Garden Design.*
Stroud, Dorothy — *Capability Brown.*
Stroud, Dorothy — *Humphrey Repton.*
Wilbur, Donald N. — *Persian Gardens and Garden Pavilions.*
Wright, Richardson — *The Story of Gardening.*

11.911 Botany and Ecology

Plant anatomy and cytology — growth and reproduction — photosynthesis, transpiration and water relations. Principles of plant classification and the use of a flora. Principal soil types, chemical and physical properties, soil profiles. Composition of selected plant communities in relation to their environment. Plant succession and climax communities with special reference to Australian conditions.

11.912G Landscape Engineering

(a) Classification of soils, shear, compaction, consolidation and permeability.

Stability of walls, embankments, cuttings and earth dams. Common causes of failure and remedial measures.

(b) Elementary hydrostatics and hydraulics. Bernoulli's Theorem, flow through orifices, over notches, in channels and pipes. Pumps and reticulating equipment.

Reference Books

King and Cresswell — *Soil Mechanics Related to Building.*
H.M.S.O., London — *Soil Mechanics for Road Engineers.*
Lewitt — *Hydraulics.*
Walshaw and Jobson — *Mechanics of Fluids.*
Rouse — *Elementary Mechanics of Fluids.*
Steel — *Water Supply and Sewerage.*
Lensley, Kohler and Paulhus — *Hydrology for Engineers.*
Brown and Bryant — *Engineering Science, Vols 1, 2 and 3.*

11.913G Theory and Practice of Landscape

Aesthetic philosophies of landscape design; scale, texture and colour. Design, construction and maintenance in urban and rural environments, including highways, residential areas, parks and gardens. Erosion control and shore protection. Landscape surveys and analyses, specifications, contracts and office procedure.

Reference Books

Crowe, Sylvia — *The Landscape of Power.*
Crowe, Sylvia — *The Landscape of Roads.*
Crowe, Sylvia — *Tomorrow's Landscape.*
Eckbo, Garrett — *The Art of Home Landscaping.*
Lynch, K. — *Site Planning.*
Simonds, J. O. — *Landscape Architecture.*
Snow, W. Brewster — *The Highway and the Landscape.*
Colvin, Brenda — *Land and Landscape.*

11.914 Forestry and Horticulture

Principal commercial trees — identification — planting techniques, care and maintenance, including fire and insect pests, and felling techniques. Forest nursery practice and forest economics.

Characteristics, identification and specific requirements of selected plants and shrubs. Soil requirements and cultivation. Grasses, lawn and playing field construction. Use of herbicides and selective weed killers — control of insect pests.

Reference Books

Lord, E. E. — *Shrubs and Trees for Australian Gardens.*
Beadle, Evans and Carolin — *Handbook of the Vascular Plants of the Sydney District and Blue Mountains.*
Dallimore and Jackson — *A Handbook of Coniferae.*
Anderson, R. H. — *Eucalypts of N.S.W.*
Hellyer — *The Gardeners Golden Treasury.*
Dawson — *Practical Lawncraft.*
Rees, J. L. — *Lawns, Greens and Playing Fields*

11.915G Landscape Design

A series of design assignments involving the application of lecture material. It is anticipated that extra-mural work will be necessary in addition to the studio periods provided for this subject.

11.920G Theory of Neighbourhood Planning

The neighbourhood concept; its historical evolution and development. Relationship to the town plan. Neighbourhood structure and form. Environmental areas and precincts. Elements of the neighbourhood. Neighbourhood densities and areas. Housing densities. Civic Design considerations.

11.921G Practice of Neighbourhood Planning

Research and practice in: design and layout principles; land subdivision and street patterns; landscaping; housing types and groups; provision of open spaces, schools, shops and other recreational and community facilities. Associated housing and town planning legislation. Slum clearance. Responsibilities of local authority.

11.922G Communications and Utility Services

Vehicular and pedestrian circulation patterns. Origin and destination surveys. Traffic function and capacity of neighbourhood roads. Principles and practice of local road construction, water and sewerage reticulation, and drainage. Local supply of electricity, gas, telephone, etc. services.

11.923G Land and Housing Economics

Economics of location. Principles of valuation of residential land and buildings. Tenancy and ownership; lease control and restrictive covenants. Financing of private and government housing estates. Economic problems of slum clearance. Statistics: basic data and techniques.

11.924G Urban Sociology

Social objectives of neighbourhood planning. Structure and culture of society. Urban ecology. "Suburbia" as a way of life. Social mobility. The public image of residential districts. Community facilities. Basic social surveys for planning: data and techniques.

Course Reference Books

Bergel, E. E. — *Urban Sociology.*
Beshers, J. M. — *Urban Social Structure.*
Brown, A. J. and Sherrard, H. M. — *Town and Country Planning.*
Burns, W. — *New Towns for Old: The Technique of Urban Renewal.*
City of Kinston, North Carolina — *Neighbourhood Analysis, 1961.*
Ericksen, E. G. — *Urban Behavior.*
G. B. Ministry of Transport — *Traffic in Towns (Buchanan Report).*
Gibberd, Frederick — *Town Design.*
Greer, Scott — *The Emerging City.*
Hatt, P. K. and Reiss, A. J. — *Cities and Society.*
Jacobs, Jane — *The Death and Life of Great American Cities.*
London County Council — *The Planning of a New Town.*
Lynch, Kevin — *The Image of the City.*
Mumford, Lewis — *The City in History.*
Osborn, F. and Whittick, A. — *The New Towns: The Answer to Megalopolis.*
Rasmussen, S. E. — *Towns and Buildings.*
Ritter, Paul — *Planning for Man and Motor.*
Sjoberg, Gideon — *The Pre-industrial City: Past and Present.*
Stein, C. S. — *Toward New Towns for America.*
Tunnard, C and Pushkarev, B. — *Man Made America: Chaos or Control?*

Calendar of Dates, 1965

JANUARY

Wednesday, 27	Last day for acceptance of applications to enrol by new students and students repeating first year.
Monday, 25 to Saturday, Feb. 6	Deferred Examinations.

FEBRUARY

Monday, 1	Australia Day — Public Holiday.
Monday, 15	Enrolment Week commences for new First Year students.
Monday, 22	Enrolment Week commences for students re-enrolling.

MARCH

Monday, 1	First Term lectures commence.
Wednesday, 31	Last day for acceptance of enrolments.

APRIL

Friday, 16 to Monday, 19	Easter Holidays.
Wednesday, 21	Conferring of Degrees.
Monday, 26	Anzac Day — Public Holiday.

MAY

Saturday, 15	First Term ends.
Monday, 31	Second Term commences.

JUNE

Monday, 14	Queen's Birthday — Public Holiday.
Wednesday, 30	Last day for acceptance of applications for re-admission after exclusion under rules governing re-enrolment.
	Last day for acceptance of applications for examinations — 24-week courses.

JULY

Tuesday, 6	Foundation Day.

AUGUST

Friday, 6	Last day for acceptance of applications for examinations — 30-week courses.
Saturday, 7	Second Term ends.
Monday, 30	Third Term commences.

SEPTEMBER

Saturday, 18	Annual Examinations commence — 24-week courses.

OCTOBER

Monday, 4	Six Hour Day — Public Holiday.
Saturday, 30	Lectures cease.

NOVEMBER

Saturday, 6	Annual Examinations commence — 30-week courses.

1966

JANUARY

Monday, 24 to Saturday, Feb. 5	Deferred Examinations.
Monday, 31	Australia Day — Public Holiday.

FEBRUARY

Monday, 21	Enrolment Week commences for new First Year students.
Monday, 28	Enrolment Week commences for students re-enrolling.

MARCH

Monday, 7	First Term lectures commence.